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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/735,426      | 12/12/2003  | Marion Heinz         | 12251               | 2304             |
| 28484           | 7590        | 09/11/2006           |                     | EXAMINER         |
|                 |             |                      |                     | SERGENT, RABON A |
|                 |             |                      | ART UNIT            | PAPER NUMBER     |
|                 |             |                      | 1711                |                  |

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |              |
|------------------------------|-----------------|--------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |
|                              | 10/735,426      | HEINZ ET AL. |
|                              | Examiner        | Art Unit     |
|                              | Rabon Sergeant  | 1711         |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 June 2006.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-16 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____.                                     |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____.                         |

1. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to define the term, “essentially compact”, as it pertains to the invention, as claimed. Applicants have stated that the term requires that the adduct be non-foamed, which is considered to mean that the adduct is devoid of cells or a cellular structure. However, the claims clearly provide for the presence of hollow microspheres, which will yield an adduct having cells or a cellular structure.

2. Claims 2, 4-7, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants have claimed that the thermal conductivity is determined by “a hot wire method”; however, it is unclear if the reference to “a hot wire method” corresponds only to the hot wire method disclosed within page 7, lines 38+ of the specification. If applicants intend that other methods be encompassed by the language, then applicants have failed to provide adequate guidance with respect to these other testing methods. One could not apply other such methods without resorting to undue experimentation. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

Applicants' response has been considered; however, despite applicants' response, it remains unclear that "a hot wire method" refers only to the hot wire method disclosed within page 7, lines 39+ of the specification.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, for the reasons given within paragraph 1, the requirement that the adduct be essentially compact cannot be reconciled with the requirement that hollow microspheres be present, as this will yield an adduct having cells or a cellular structure.

Secondly, the language, "the fillers", of claims 4-7 lacks antecedence from claims 1 and 2.

Thirdly, within claims 8 and 11-13, the components for b) are not mutually exclusive. Despite applicants' response, the position is maintained that Component bi) overlaps Component bii), Component bv) overlaps Components biii) and biv), and Component biv) overlaps Component bii), in terms of functionality and molecular weight. As drafted, a single specific reactant will satisfy the requirements of multiple components; accordingly, one of ordinary skill could not clearly determine the metes and bounds of the claim, since one could not determine if multiple components, though overlapping, are required. Despite applicants' remarks, component bii) is not required to be a polyether.

Lastly, with respect to claim 15, applicants have stated that the lower endpoint for the molecular mass of component bi) is 300; however, within claim 8, the molar mass is claimed as being greater than 300; therefore, the ranges are inconsistent.

Art Unit: 1711

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bartz et al. (US 2001/0051261).

Bartz et al. disclose compact polyurethanes produced from polyisocyanates which may be higher than difunctional (note the use of p-MDI and mixtures thereof within paragraph [0025])

and polyol components that meet those claimed. Applicants' components b1) and b1ii) are met by the reference's component b13). Applicants' components b1ii) and b1iv) are met by the reference's component b11). Applicants' component b1v) is met by the reference's component b12). See paragraphs [0001] through [0029], [0031], and [0034].

6. Claims 1-3 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Onder (US 2004/0087739 A1).

The reference discloses thermoplastic ether urethane having applicants' claimed crystalline content and aromatics content. The crystalline content is disclosed within paragraph [0020] and the aromatics content is evident from the type and amounts of reactants used within the examples. Furthermore, the use of fillers is disclosed within paragraph [0018].

7. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onder (US 2004/0087739 A1) in view of Grimm et al. ('447) and Poisl et al. (US 2003/0134920).

As aforementioned, the primary reference discloses thermoplastic ether urethane having applicants' claimed crystalline content and aromatics content, which may also contain fillers. Though the reference is silent regarding the use of microspheres as fillers, their use was nonetheless known at the time of invention. The secondary references disclose that glass, polymeric, and ceramic microspheres convey beneficial physical and thermal properties when incorporated within polymers. See abstract and columns 1-3 within Grimm et al. See paragraph [0005] within Poisl et al. Therefore, the position is taken that it would have been obvious to incorporate microspheres as fillers within the primary reference, in view of the benefits that would reasonably be expected to result from their incorporation. It has been held that it is

obvious to utilize a known component for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

8. Applicants have argued that the amendment specifying that the polyisocyanate has a functionality greater than 2 distinguishes the instant invention from Onder. In response, despite applicants' remarks, Onder allows for the use of polyisocyanates having functionalities that exceed 2. See paragraph [0013]. Applicants' claims do not exclude lower functionality polyisocyanates and do not specify quantities of the high functionality polyisocyanate that must be present; therefore, the claims have not been distinguished from Onder. Accordingly, applicants' arguments are not commensurate in scope with the claims.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.



RABON SERGENT  
PRIMARY EXAMINER

R. Sergent  
September 5, 2006